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**FEE TRANSMITTAL**  
**for FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant Claims small entity status. See 37 CFR 1.101.**TOTAL AMOUNT OF PAYMENT (\$)** 180.00**Complete if Known**

Application Number	09/922,815
Filing Date	August 6, 2001
First Named Inventor	Michaluk et al.
Examiner Name	Andrew L. Oltmans
Art Unit	1742
Attorney Docket No.	98048CON (3600-090-02)

**METHOD OF PAYMENT (check all that apply)**☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☒ Deposit Account

Deposit Account Number

03-0060

Deposit Account Name

Cabot Corporation

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee

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**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

**SUBTOTAL (1)** (\$ 0.00**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims		Extra Claims		Fee from below		Fee Paid
Independent	Claims	-20**=	X			
		-3**=	X			

Multiple Dependent

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	**Reissue independent claims over original patent	
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent	

**SUBTOTAL (2)** (\$ 0.00

\*\* or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unintentional	
1453	1,330	2453	665	Petition to revive - intentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

(\$ 180.00

**SUBMITTED BY**

Name (Print/Type)

Luke A. Kilyk

Registration No.  
(Attorney/Agent)

33,251

Complete (if applicable)

Telephone

1-540-428-1701

Signature

Date

August 12, 2004

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Date: August 12, 2004 Label No. EV428579872US I hereby certify that, on the date indicated above, I deposited this paper with identified attachments and/or fee with the U.S. Postal Service and that it was addressed for delivery to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 by "Express Mail Post Office to Addressee" service.

Donald S. Prater

Name (Print)

Signature

08-13-04 180 1742  
Date: August 12, 2004 Label No. EV428579872US I hereby certify that, on the date indicated above, I deposited this paper with identified attachments and/or fee with the U.S. Postal Service and that it was addressed for delivery to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 by "Express Mail Post Office to Addressee" service.

Donald S. Prater  
Name (Print)

Donald S. Prater  
Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of: MICHALUK et al. )

Examiner: Andrew L. Oltmans )

Application Number: 09/922,815 )

Group Art Unit: 1742 )

Filed: August 6, 2001 )

Confirmation No.: 9155 )

Docket No.: 98048CON (3600-090-02) )

For: HIGH PURITY TANTALUM, PRODUCTS CONTAINING THE SAME, AND METHODS  
OF MAKING THE SAME

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AND INTERFERENCES

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**SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**  
**PURSUANT TO 37 CFR 1.97(c)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

August 12, 2004

Sir:

The attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached Form PTO-1449. One copy of each of these documents is attached.

This Information Disclosure Statement is being submitted after expiration of the three-month period following filing of the above-captioned application, but before any Final Office Action or Notice of Allowance.

The above information is presented so that the Patent and Trademark Office can, in the first instance, determine any materiality thereof to the claimed invention. See 37 CFR 1.104(a) and 1.106(b) concerning the PTO duty to consider and use any such information. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the documents cited in the attached Form PTO-1449 be made of record therein and appear on the first page of any patent to issue therefrom.

08/16/2004 WABDELRI 00000052 030060 09922815  
01 FC:1806 180.00 DA

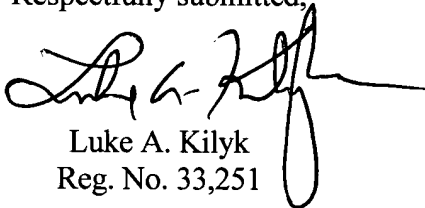
Second Supplemental Information Disclosure Statement  
U.S. Patent Application No. 09/922,815

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in this application and applicant determines that the cited documents do not constitute "prior art" under United States law, applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

Please charge the fee of \$180.00 to Deposit Account No. 03-0060. If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account 03-0060.

Respectfully submitted,



Luke A. Kilyk  
Reg. No. 33,251

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Enclosures: Form PTO-1449, w/43 Documents

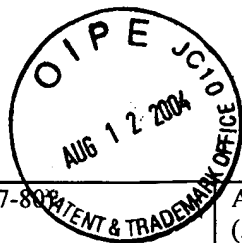
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BOARD OF PATENT APPEALS  
AND INTERFERENCES

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	Friedman, "Grain Size Refinement in a Tantalum Ingot," <i>Metallurgical Transactions</i> , Vol. 2, p. 337-341, January 1971.
	"Miller Indices," <i>Manual of Mineralogy</i> , 20 <sup>th</sup> Edition, p. 39-40.
	Wright et al., Effect of Annealing Temperature on the Texture of Rolled Tantalum and Tantalum-10 Wt.% Tungsten," <i>Tungsten and Refractory Metals</i> 2, p. 501-508.
	Titterington et al., "The Production and Fabrication of Tantalum Powder," <i>Symposium on Powder Metallurgy 1954</i> , Special Report No. 58, p. 11-18.
	Michaluk, "Factors Affecting the Mechanical Properties and Texture of Tantalum," <i>The Minerals, Metals &amp; Materials Society</i> , p. 205-217, (1996).
	Tripp, "The Production of Tantalum by the Sodium Reduction Process," <i>The Minerals, Metals &amp; Materials Society</i> , p. 23-27, (1996).
	Fukang et al., "Tantalum Industry in China," <i>The Minerals, Metals &amp; Materials Society</i> , p. 287-292, (1996).
	Eckert, "The Industrial Application of Pyrometallurgical, Chlorination and Hydrometallurgy for Producing Tantalum Compounds," <i>The Minerals, Metals &amp; Materials Society</i> , p. 55-61.
	Suri et al., "Studies on Tantalum Extraction," <i>The Minerals, Metals &amp; Materials Society</i> , p. 39-46, (1996).
	Albrecht et al., "Modern Extraction of Tantalum and Niobium With Special Emphasis on the Production of High Purity Compounds," p. 219-240.
	Nair et al., "Production of Tantalum Metal by the Aluminothermic Reduction of Tantalum Pentoxide," <i>Journal of the Less-Common Metals</i> , Vol. 41, p. 87-95, (1975).
	Klopp, et al., "Purification Reactions of Tantalum During Vacuum Sintering," <i>Transactions of The Metallurgical Society of AIME</i> , Vol. 218, p. 971-977, December 1960.
	Jain et al., "Pilot Plant Production of Capacitor Grade Tantalum Powder," <i>Transactions of The Indian Institute of Metals</i> , p. 1-8, December 1971.
	Crockett et al., "Niobium (Columbium) and Tantalum," <i>International Strategic Minerals Inventory Summary Report, U.S. Geological Survey Circular 930-M</i> , p. 1-36, (1993).
	Kononov et al., "Electrorefining in Molten Salts - An Effective Method of High Purity Tantalum, Hafnium and Scandium Metal Production," <i>Journal of Alloys and Compounds</i> 218, p. 173-176, (1995).
	Bose et al., "Preparation of Capacitor Grade Tantalum Powder," <i>Transactions of the Indian Institute of Metals</i> , p. 1-5, June 1970.
	Korinek, "Tantalum - An Overview," <i>The Minerals, Metals &amp; Materials Society</i> , p. 3-15.
	Burns et al., "Evolution of Applications of Tantalum," <i>The Minerals, Metals &amp; Materials Society</i> , p. 273-285.
	Jun et al., "Low Temperature Deposition of TaCN Films Using Pentakis (Diethylamido) Tantalum," <i>Mat. Res. Soc. Symp. Proc. Vol. 217, Materials Research Society</i> , p. 349-354, (1996).
	Gupta, "Extractive Metallurgy of Niobium, Tantalum, and Vanadium," <i>International Metals Reviews</i> , Vol. 29, No. 6, p. 405-444, (1984).
	Hojas, "Radial Forging," <i>Metals Handbook</i> , 9 <sup>th</sup> Edition, Vol. 14, p. 145-149. (1988).

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449 (REV 7-80)		Atty. Docket No. 98048CON (3600-090-02)	Application No. 09/922,815
<b>INFORMATION DISCLOSURE STATEMENT</b>		APPLICANT: MICHALUK et al.	
		Filing Date: August 6, 2001	Group Art Unit: 1742

### U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE, IF APPROPRIATE
	A	4,619,695	10/28/86	Oikawa et al.	75	65 EB	
	B	4,673,554	6/16/87	Niwa et al.	423	63	
	C	4,727,928	3/1/88	DeVynck et al.	164	469	
	D	4,842,706	6/27/89	Fukasawa et al.	204	298	
	E	4,960,163	10/2/90	Fang et al.	164	459	
	F	5,442,978	8/22/95	Hildreth et al.	75	363	
	G	5,693,203	12/2/97	Ohhashi et al.	204	298.12	
	H	5,809,393	9/15/98	Dunlop et al.	419	61	
	I	US 2002/ 0063056 A1	5/30/02	Shah et al.	204	298.13	
	J	US 2002/ 0132388 A1	9/19/02	Rosenberg et al.	438	77	
	K	US 2002/ 0153248 A1	10/24/02	Shah et al.	204	298.13	

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### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
							YES	NO
	L	252,442	6/9/60	Australia			X	
	M	S 62-297-463	12/24/87	Japan			X	
	N	03-082773	4/8/91	Japan			Abstract	
	O	JP 03-197640	8/29/91	Japan			X	
	P	0 590 904 A1	9/27/93	EPO			X	
	Q	6[1994]-264232	9/20/94	Japan			Abstract	
	R	DE 198 41 774 A1	9/11/98	Germany			Abstract	
	S	EP 0 281 141 B2	6/28/00	EPO			X	

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Hughes et al., "Grain Subdivision and the Development of Local Orientations in Rolled Tantalum," <i>The Minerals, Metals &amp; Materials Society</i> , p. 257-262, (1996).
	"Tantalum and Tantalum Compounds," <i>Encyclopedia of Chemical Technology</i> , Vol. 22, Third Edition, p. 541-564.